

CLAIMS

What is claimed:

1. A method of testing a circuit on a substrate, comprising:
locating the substrate in a transfer apparatus;
moving a surface of a test chuck into contact with the substrate held by the transfer apparatus;
securing the substrate to the test chuck;
moving the substrate off the transfer apparatus;
recording an image of a surface of the substrate;
moving terminals on the substrate into contact with contacts to electrically connect the circuit through terminals and the contacts to a tester, no more than a single image of the surface having been recorded;
relaying signals through the terminals and the contacts between the electric tester and the circuit;
disengaging the terminals from the contacts; and
removing the substrate from the test chuck.
2. The method of claim 1 wherein the transfer apparatus is a transfer chuck and the image is recorded before having moved the substrate off the transfer

chuck.

3. The method of claim 2 wherein the image is recorded while moving the substrate off the transfer chuck.

4. The method of claim 1 wherein the transfer apparatus is a transfer chuck and a plurality of separate substrates are located in the transfer chuck, a respective surface of the test chuck is moved into contact with each substrate, each substrate is secured to the test chuck, the substrates move simultaneously off the transfer chuck, and the substrates move simultaneously past the image recordation device so that an image of a surface of each substrate is recorded, each substrate having been moved once only past the image recordation device before the contacts contact terminals on the respective substrate.

5. The method of claim 4 wherein the images are recorded before having moved the substrates off the transfer chuck.

6. The method of claim 5 wherein the images are recorded while moving the substrates off the transfer chuck.

7. The method of claim 4 wherein the image recordation device is a line

scanner having a lens which focuses on the surfaces of the substrates.

8. The method of claim 1, further comprising:

moving the test chuck so that the substrate moves past an image recordation device to record the image of the surface once only before moving the terminals into contact with the contacts.

9. A method of testing a circuit on a plurality of separate substrates, comprising:

locating the substrates in respective slots in a transfer chuck;

moving a plurality of respective surfaces of a test chuck into contact with each respective substrate held by the transfer chuck;

securing the substrates to the test chuck;

moving the test chuck relative to the transfer chuck so that the substrates move off the transfer chuck;

moving the test handler so that the substrates move past an image recordation device having at least one lens focusing on a line across a width, transverse to a direction in which the substrates move, of each substrate, to record an image of a surface of each substrate;

moving terminals on the substrates into contact with contacts to electrically connect a circuit on each substrate through the terminals and the

contacts to an electric tester, each substrate having been moved once only past the image recordation device to record the image of the surface of the respective substrate;

relaying signals through the terminals and the contacts between the electric tester and the respective circuits;

disengaging the terminals from the contacts; and

removing the substrates from the test handler.